

### *Amendments to the Claims*

This listing of claims will replace all prior versions and listings of claims.

1-36. (canceled)

37. (currently amended) An isolated protein comprising an amino acid sequence selected from the group consisting of:

- (a) amino acid residues 1 to 775 of SEQ ID NO:15;
- ~~(b) amino acid residues 428 to 437 of SEQ ID NO:15; and~~
- (e-b) the amino acid sequence of the ADAM polypeptide encoded by the cDNA contained in NIBH Accession No. FERM BP-6474; ~~and~~
- ~~(d) the amino acid sequence of the ADAM polypeptide encoded by the cDNA contained in IFO Accession No. IFO 16173.~~

38. (previously presented) The isolated protein of claim 37 wherein said amino acid sequence is (a).

39. (previously presented) The isolated protein of claim 37 wherein said amino acid sequence is (b).

40-41. (canceled)

42. (previously presented) The isolated protein of claim 37, wherein the C-terminus of said protein is a carboxyl group (-COOH), a carboxylate (-COO-), an amide (-CONH<sub>2</sub>), or an ester (-COOR).

43. (previously presented) The isolated protein of claim 42, wherein the R in said ester is a C1-6 alkyl group, a C3-8 cycloalkyl group, C6-12 aryl group, a C7-14 aralkyl group, or an  $\alpha$ -naphthyl-C1-2 alkyl group.

44. (previously presented) The isolated protein of claim 37, wherein said protein is conjugated to a glycoprotein.

45. (previously presented) A composition comprising the isolated protein of claim 37 and a physiologically acceptable salt.

46. (previously presented) A protein produced by a method comprising:

- (a) expressing the protein of claim 37 by a cell; and
- (b) recovering the protein.

47. (currently amended) An isolated protein comprising a first amino acid sequence ~~90%~~ 95% or more identical to a second amino acid sequence selected from the group consisting of:

- (a) amino acid residues 1 to 775 of SEQ ID NO:15; and
  - (b) the amino acid sequence of the ADAM polypeptide encoded by the cDNA contained in NIBH Accession No. FERM BP-6474; ~~and~~
  - ~~(c) the amino acid sequence of the ADAM polypeptide encoded by the cDNA contained in IFO Accession No. IFO 16173;~~
- wherein said protein has proteoglycan degrading activity.

48. (previously presented) The isolated protein of claim 47 wherein the second amino acid sequence is (a).

49. (previously presented) The isolated protein of claim 47 wherein the second amino acid sequence is (b).

50-51. (canceled)

52. (previously presented) The isolated protein of claim 47 wherein said first amino acid sequence is 98% identical to said second amino acid sequence.

53. (previously presented) The isolated protein of claim 47, wherein the C-terminus of said protein is a carboxyl group (-COOH), a carboxylate (-COO-), an amide (-CONH<sub>2</sub>), or an ester (-COOR).

54. (previously presented) The isolated protein of claim 53, wherein the R in said ester is a C1-6 alkyl group, a C3-8 cycloalkyl group, C6-12 aryl group, a C7-14 aralkyl group, or an  $\alpha$ -naphthyl-C1-2 alkyl group.

55. (previously presented) The isolated protein of claim 47, wherein said protein is conjugated to a glycoprotein.

56. (previously presented) A composition comprising the isolated protein of claim 47 and a physiologically acceptable salt.

57. (previously presented) A protein produced by a method comprising:

- (a) expressing the protein of claim 47 by a cell; and
- (b) recovering the protein.